Status of the 201-MHz Prototype Cavity

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MC and MUCOOL Friday Phone Conference

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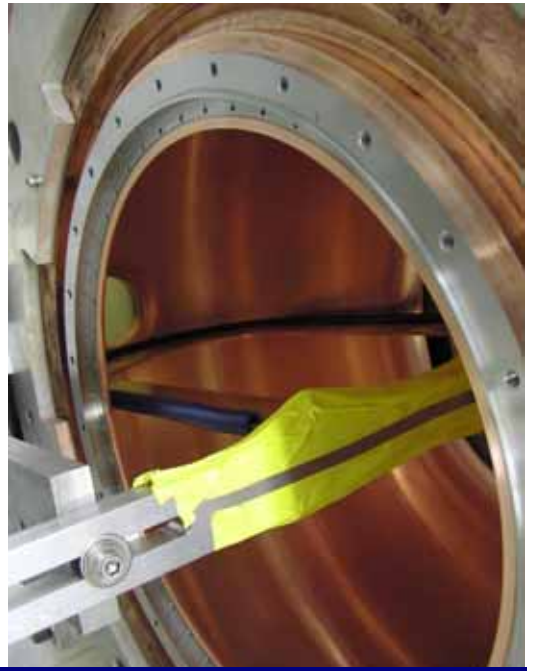
The 201 MHz Prototype Cavity

The Cavity is still at J-Lab now

- **The EP setup was ready in early June, 2005**

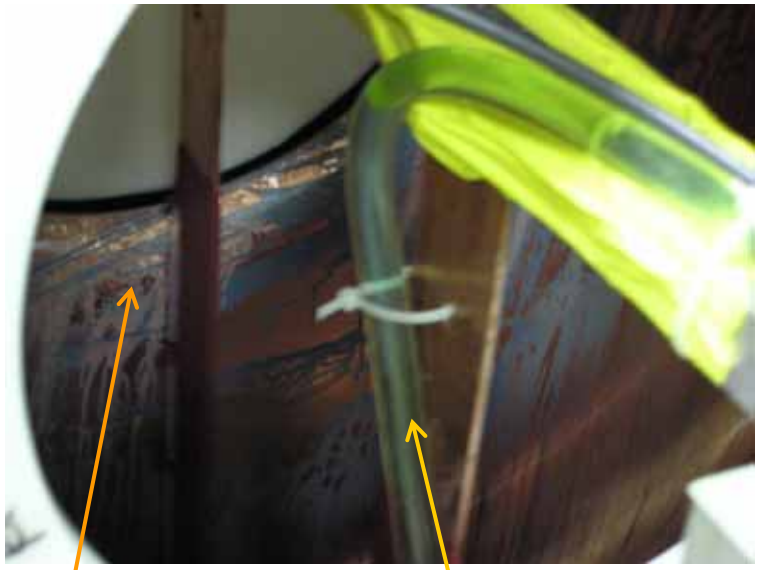


U-Shape Electrode
(inside and outside the cavity)

The 201 MHz Prototype Cavity

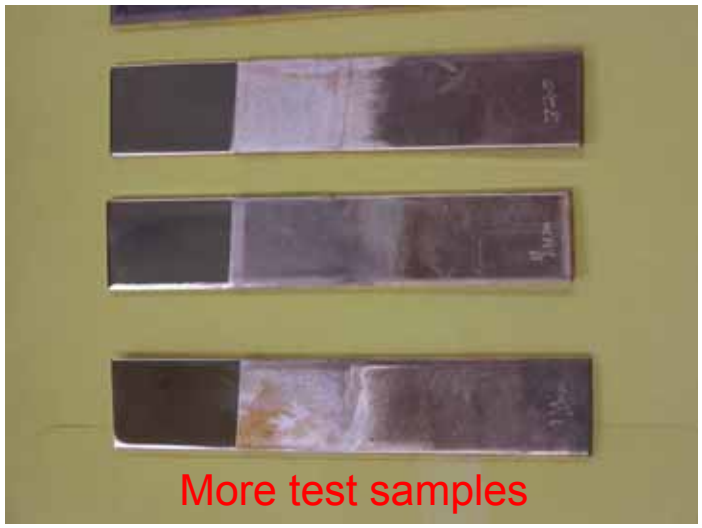
- **EP setup works, but the first EF was unsuccessful**

— About 13 lbs of copper removed
— 40.6 in^3 removed (0.32 lb/in^3)
— Cavity interior surface area: ~ 4700 in2
— Average thickness removed: 8.6 mils (219 microns)
— Amounts to 3.4% to 5.0% of the initial thickness
— Green crystals developed due to the saturated and overheated solution
— Un-even surface and hard to clean away, and had to be mechanically cleaned again
— Thermal sensors failed

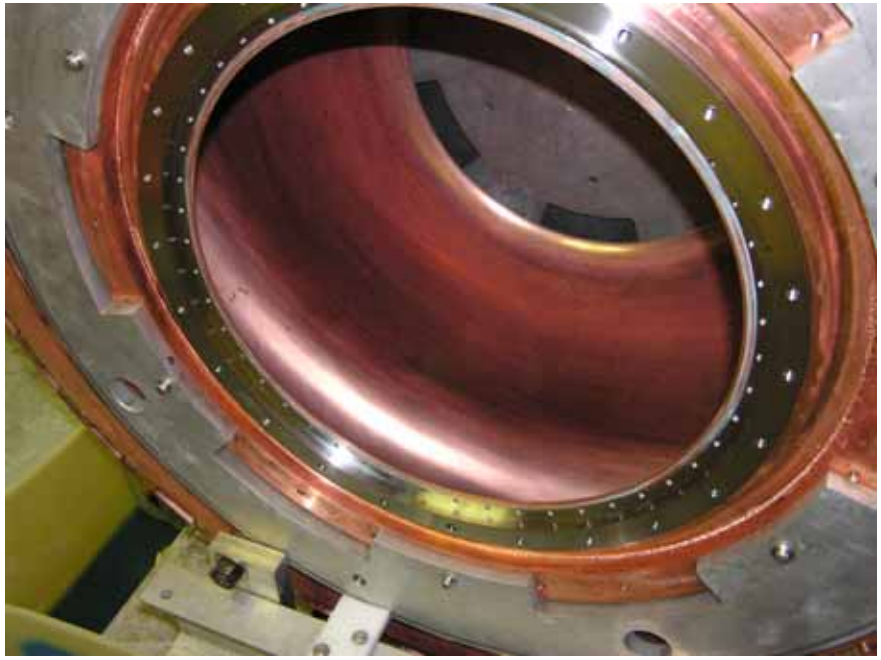


The 201 MHz Prototype Cavity

- **Mechanical Buffing and the 2nd EP Preparation (~ one week ago)**
  - **More EP test samples**
  - **Temperature monitor and control**
  - **Inspection every 15 minutes**
  - **Adding a heat exchanger**
  - **Saturation control:**
    - **max 15 ~ 18 grams per liter**



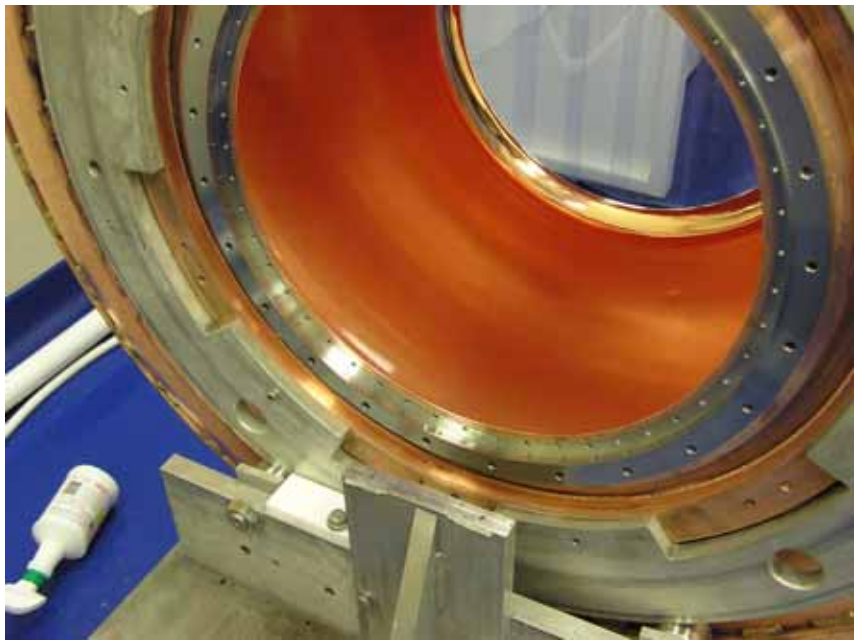
More test samples



After mechanical buffing, very nice surface finish!

The 201 MHz Prototype Cavity

- **The 2nd EP was very successful (done yesterday - July 28, 2005)**
  - **Shining surface finish in most area, except iris area**
  - **Mechanical buffing at the area**
  - **New electrode for final EP at the iris only**
  - **Final EP yesterday + High pressure water rinsing**



What's Next?

- Vacuum assembly at J-Lab
- Base pressure measurement
- EP copper windows
- Ti-N coating on the copper windows
- Final assembly
- Low power microwave measurements in air
  - — Frequency and Q
- Prepare for shipping to the MTA
  - — Building shipping boxes
  - — Shipping method

Shipping Address?

- Shipping address of the MTA?
- Expect to ship from J-Lab at the end of next week
- Couplers will be shipped separately from SNS

Summary

- Despite delays, we are happy with the result
- Expect to start the 201 MHz cavity program at the MTA in mid-August 2005
- Thanks R. Rimmer and his team members at J-Lab for the hard work!